ANNUAL REPORT

for the fiscal year
ending March 31, 1990

Department of the Environment

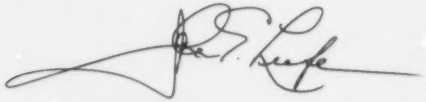
92-00477/

To His Honour
The Honourable Lloyd R. Crouse, P.C.
Lieutenant-Governor of Nova Scotia

May It Please Your Honour:

The undersigned has the priviledge to present to your Honour the Annual Report of the Nova Scotia Department of the Environment for the fiscal year ending March 31, 1990.

Respectfully submitted,



John G. Leefe
Minister of the Environment

The Honourable John G. Leefe
Minister of the Environment
Province of Nova Scotia

Sir:

I have the honour to present to you the Annual Report of the Nova Scotia Department of the Environment for the fiscal year ending March 31, 1990.

Respectfully submitted,

Armand F. Pinard
Deputy Minister

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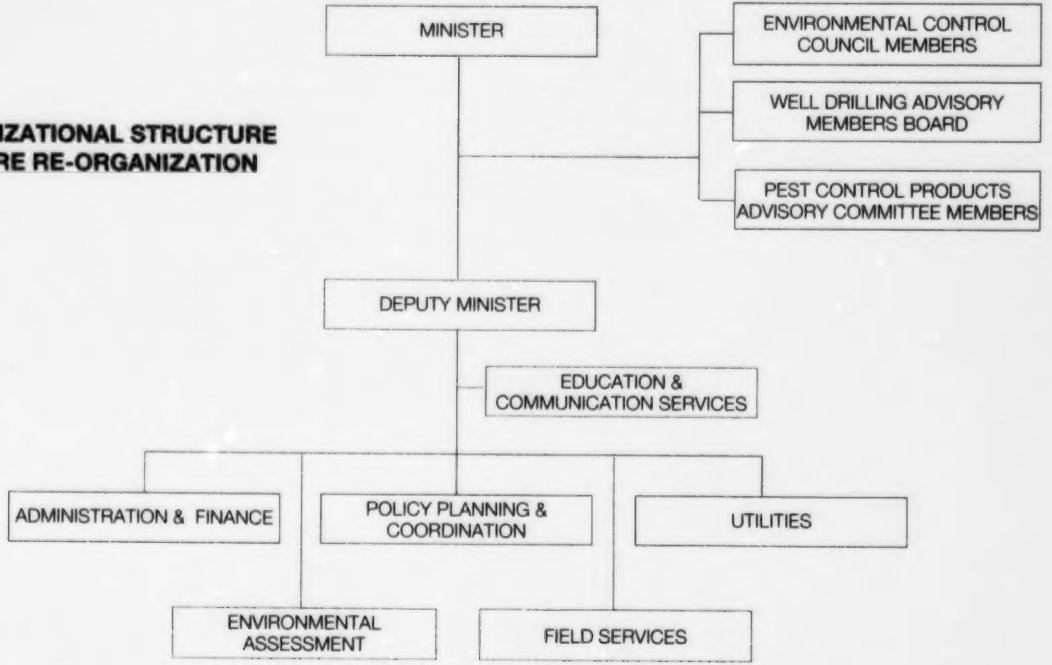
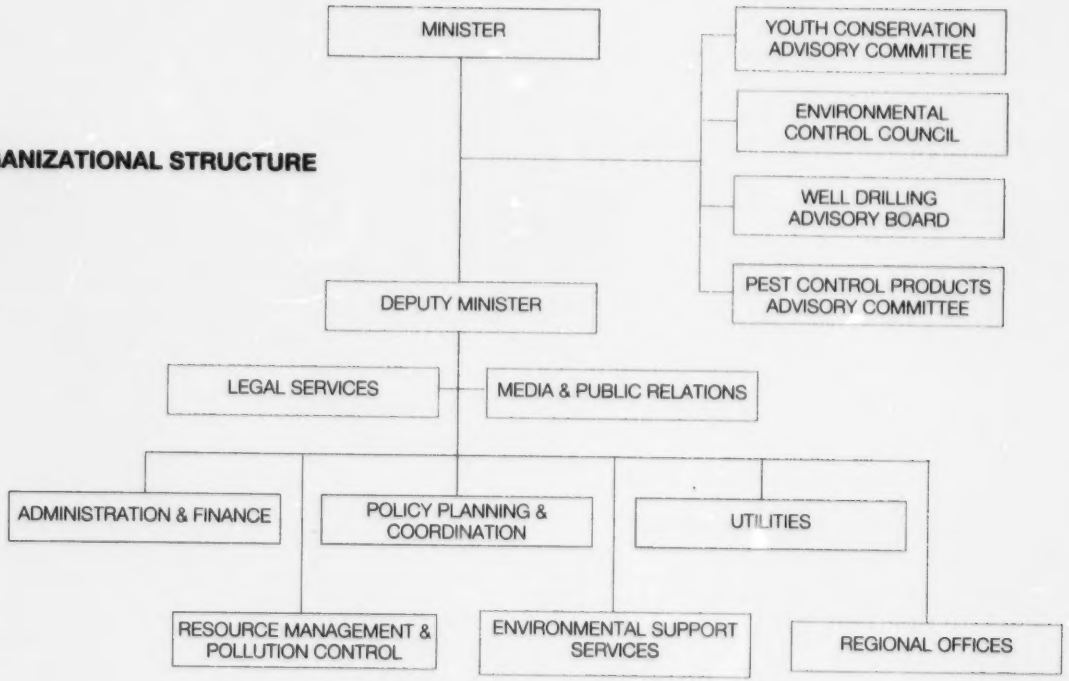


CURRENT ORGANIZATIONAL STRUCTURE



DEPARTMENT FUNCTION AND ORGANIZATION

The Nova Scotia Department of the Environment was established in 1973 and is responsible for the protection of the provincial air, water, and land resources for the citizens of Nova Scotia and future generations.

The Minister, under the Environmental Protection Act, is responsible for the supervision and control of management, preservation, and protective mechanisms to ensure efficient and non-destructive use of our renewable resources.

The department's role substantially increased with the implementation of re-organization in February 1990. Re-organization is designed to increase the regional presence of the department and to provide for quicker, more effective access to environmental services.

LEGISLATION

The department administers the following legislation:

- Environmental Protection Act
- Water Act
- Clean Nova Scotia Act
- Dangerous Goods and Hazardous Waste Management Act
- Derelict Vehicles Removal Act
- * Environmental Assessment Act
- * Litter Abatement Act
- * Ozone Layer Protection Act
- Pest Control Products Act
- * Recycling Act
- Well Drilling Act
- * Youth Conservation Act

NEW LEGISLATION

The fiscal year ending March 31, 1990 saw important new legislation covering a wide variety of environmental issues. Over the course of the year, five new acts were proclaimed.

* The Environmental Assessment Act requires that all major projects with potentially significant environmental impacts must undergo a full assessment during early planning stages. The assessment includes a technical review and may be referred to a review panel for public hearings. The legislation came into force on July 14, 1989.

* The Litter Abatement Act gives the Minister powers to approve packaging, to designate depots for returnable packages and to prohibit littering through the establishment of fines and the regulation of waste disposal practices. This act came into force on March 1, 1990, repealing the Beverage Containers Act.

* The Ozone Layer Protection Act gives the Minister the power to identify substances and products that are harmful to the ozone layer and to order a ban on the sale and manufacture of these products. This act came into effect on June 15, 1989.

* The Recycling Act is designed to promote recycling throughout Nova Scotia through the establishment of the Resource Recovery Fund. The fund will use monies collected from designated industries to further recycling and waste reduction programs. The act also provides for education, marketing, standards, and cost-sharing arrangements and has been in force since March 1, 1990.

* The Youth Conservation Corps Act establishes summer and long-term employment programs for young people between the ages of 17 and 24. Working in environment-related fields around the province, these young people learn a variety of skills and are able to provide communities with significant environmental improvements. The act came into effect on July 18, 1989.

REGULATIONS

The Nova Scotia Department of the Environment administers the following regulations:

Asbestos Waste Regulations
* Dangerous Goods Storage Regulations
PCB Storage Regulations
Petroleum Storage Regulations
* Derelict Vehicles Removal Regulations
Public Hearing Regulations
Waste Management and Waste Disposal Facilities Grants and Loans Regulations
Water Quality Standards (Suspension or Cancellation of Permits) Regulations
General (Suspension or Cancellation of Permit) Regulations
Herring Waste Burial Regulations
Biomedical Waste Incinerator Regulations
* Delegation of Authority Regulations
* Municipal Waste Incinerator Regulations
* Pest Control Products Regulations
* Delegation of Authority Regulations
* Water License and Permit Regulations
Well Drilling Regulations
* Environmental Assessment Regulations

NEW REGULATIONS

During 1989–90, the department developed and implemented the following regulations.

* Dangerous Goods Storage Regulations apply to a variety of dangerous and hazardous materials that are **not** governed by other regulations, such as significant quantities of explosives, flammables, corrosives, and toxics. These substances must be stored properly and owners or operators of facilities must provide adequate posting, labelling, security measures, inventories, contingency plans for spills and emergencies, and staff training. These regulations came into effect on July 5, 1989.

* Derelict Vehicles Regulations provide programs and financial assistance for municipalities that wish to remove and recycle abandoned vehicles. These regulations obtained royal assent on March 13, 1990, and will come into force on April 1, 1990.

* Delegation of Authority Regulations (Environmental Protection Act) give the Minister the power to appoint an officer to act in his or her place in the event of special circumstances such as the absence or illness of the Minister or the Deputy Minister. These regulations came into effect on October 1, 1989.

* Municipal Waste Incinerator Regulations set out requirements for municipal waste incinerators with respect to permits, disposal sites, ambient air quality, stack emissions and minimum temperature. Effective: March 1, 1990.

* Pest Control Products Regulations establish a licensing system for all vendors and applicators of registered pesticides. The regulations also make specific requirements as to permits, posting, contingency plans, and disposal. Effective: July 1, 1989.

* Delegation of Authority Regulations (Water Act) give the Minister the power to appoint an officer to act in his or her place. The officer can order immediate action in the event of an alteration of a watercourse or an unlawful discharge. Effective: October 1, 1989.

* Water Licence and Permit Regulations establish a licence and permit system for a variety of activities to do with withdrawing water, altering a watercourse or constructing dams, pipelines, bridges, fishways, etc. Proclaimed: March 13, 1990, to come into effect on April 15th, 1990.

Environmental Assessment Regulations delineate the timetable and conditions that must be fulfilled by any undertaking registered under the Environmental Assessment Act. The regulations also list two schedules of Class I and Class II projects. Effective: July 14, 1989.

HIGHLIGHTS OF 1989-90

Halifax Harbour Clean-Up

The Premier commissioned a task force, under the chairmanship of Dr. Robert Fournier, to review the proposed regional sewage treatment project for Halifax Harbour. In April 1989 the task force started looking at previous studies, holding public meetings, and inviting written submissions. The mandate of the task force is to advise on marine environmental and socio-economic issues and to recommend outfall location, treatment levels, and plant siting.

Sydney Tar Ponds Clean-Up

In July 1989, the state-of-the-art "revolving fluidized bed" incinerator was chosen as the best technology for this federal/provincial clean-up of tar ponds sludge. The incinerator will be built by Superburn Contractors–Joint Venture to destroy polynuclear aromatic hydrocarbons (PAHs), while producing power to offset some of the clean-up costs. Foundation work is complete and most of the incinerator's major components have been ordered or delivered to the site.

Chemical Clean-Up in Schools

During 1989, the department assessed and reviewed unwanted chemicals in schools and advised school boards on the most appropriate disposal option. The department received inventories from 17 school boards across the province, prepared inventories of those chemicals and helped the schools contact disposal companies. The program is being used as a model for other provinces.

Household Hazardous Waste

In June, the department organized a household hazardous waste collection day for Sydney and Cape Breton County. Collected wastes were disposed of through chemical disposal companies in Quebec and Ontario. Staff began planning for hazardous wastes collection days in Queens and Lunenburg Counties.

Blue Box Program

The department sponsored a recycling and waste diversion program in Kings County. The Blue Box demonstration program began May 15, 1989. The program is cost shared 50/50 by the department and the County. Berwick, Kentville, and Wolfville are participating and, in all, about

10,000 blue boxes have been distributed. Over 700 tons of waste have been diverted and the participation rate is over 80 per cent.

Recycling

An office paper recycling program to divert government office waste paper from disposal to recycling was implemented on January 15, 1990. The program includes the Departments of Government Services and Environment in the metro area and additional department are expected to participate as the program develops. At the year's end, 17,000 lbs. of waste paper had been recycled. It would take about 147 trees to produce this much paper.

RESOURCE MANAGEMENT AND POLLUTION CONTROL DIVISION

This division is responsible for developing regulations and guidelines, developing operational policies and procedures, training field staff, evaluating programs, conducting technical research, approving major permits, and providing consulting advice to regional offices. The division is also responsible for some functions and areas of responsibility from the old Environmental Assessment and Field Services divisions. Resource Management and Pollution Control comprises five branches, each with clearly defined sections and responsibilities.

WASTE MANAGEMENT BRANCH

Environmental Emergencies and Hazardous Materials

This section is responsible for developing programs, guidelines, and regulations in the area of hazardous materials. This includes the control of dangerous goods and hazardous wastes, environmental emergencies, and the remediation of high-risk contaminated sites.

The Petroleum Storage Regulations were enacted in February 1988 and additional staff was hired to implement the regulations. The regulations were designed to protect public safety and the province's groundwater resources by requiring the upgrading of storage installations. To date, over 11,000 tanks have been registered and significant activity has occurred in the tank replacement business. Site sensitivity tank removal and tank disposal guidelines have been developed. Staff approved 627 applications under the regulations.

The PCB Storage Regulations were enacted in 1988, and during 1989 all storage locations were inspected.

The Asbestos Waste Regulations are being amended to provide for better control of storage and disposal sites and to require better long-term management of the disposal sites.

The Waste Oil Regulations are being amended. There are 14 waste oil collectors licensed in the province.

In the field of hazardous wastes, the CanChem clean-up was completed and court action was implemented against the owner. The department investigated 447 spills of hazardous materials during the year.

The department funded a $25,000 market study into the need for a special wastes transfer facility in the Burnside Industrial Park. The study was implemented by the City of Dartmouth.

Staff conducted extensive testing at a salvage yard located in the Hubley/Five Island Lake area of Halifax County. This site is believed to be contaminated with PCBs and a consultant was hired to conduct an environmental assessment of the site and to prepare a recommendation for remediation of the site.

A monitoring program on the Sackville River was conducted during 1989 to better define the impact of the landfill on the river. Samples were taken each month beginning in May 1989 at seven locations.

The department was involved in organizing a major emergency exercise and conducted training programs for the fire services in six areas of the province.

A Provincial Working Group on Emergency Response was established to review recommendations in the *Report of the Minister's Task Force on Hazardous Waste Management*. The working group began meetings in May 1989 with membership consisting of representatives from Nova Scotia Department of the Environment, Environment Canada, Emergency Measures Organization, Fire Marshal's Office, municipalities, police services, Canadian Petroleum Products Institute, and the chemical industry.

Solid and Sewage Waste Management Section

This section has the task of overseeing all municipal programs dealing with waste disposal, both solid waste and sewage. Staff provide technical assistance to municipalities, review all engineering plans for water and sewer installations, and administer the Solid Waste Assistance Program, the Pollution Abatement Assistance Program, and the Derelict Vehicles Program.

There are approximately 35 existing dump sites operating in the province. All areas except Richmond County, Shelburne County, Digby County, and the City of Sydney are involved in a solid waste study designed to facilitate the development of environmentally acceptable waste management systems. This study program provides funding for the development of regional waste management plans, pre-design on three sites for the selected plan, and the final design. Since 1975, 12 regional landfills and two incinerator systems have been developed, providing improved waste management for 75 per cent of the municipal waste generated in the province. The average study cost is $200,000. The municipalities receive full payment of these costs from the Province upon implementation of the approved waste management plan.

The Solid Waste Study Assistance Program granted financial assistance to the following municipalities:

Solid Waste

Annapolis County	Ash Disposal Project	$ 20,012.24
Truro	Solid Waste Study	53,975.00
Cumberland County	Solid Waste Study	15,253.82
Inverness County	Solid Waste Study	115,291.75
Pictou County	Solid Waste Study	13,172.71
Queens County	Solid Waste Study	141,544.94
Victoria County	Solid Waste Study	6,250.00
Total		$365,500.46

Recycling

Bridgetown	Blue Box	$ 907.09
Kings County	Blue Box	53,493.49
Kings County	Blue Box	10,610.71
Kings County	Blue Box	5,158.54
Kings County	Blue Box	6,313.54
Queens County	Recycling Project	5,000.00
Total		$ 81,483.37

20 Per Cent Grant

Queens County	Landfill	$121,304.77
Total		$121,304.77

This section also administers the Pollution Abatement Assistance Program for municipal sewage and has committed funds to the projects listed below. These pollution abatement studies provide funding for the engineering assessment of various waste water collection and treatment systems.

Sewer And Pollution Control Studies

Annapolis County	Pollution Study	$ 11,200.00
Guysborough County	Pollution Study	38,800.00
Guysborough County	Pollution Study	18,850.00
Town of Lunenburg	Pollution Study	38,274.37
Chester	Pollution Study	972.69
Mahone Bay	Pollution Study	28,136.00
Town of Pictou	Pollution Study	28,500.00
Total		$164,733.06

Sewage treatment plants, sewage lift stations and trunk collectors are eligible for 20 per cent capital assistance grants. Grants were paid to the following municipalities:

20 Per Cent Grants

Halifax County	Herring Cove	$ 55,744.55
Halifax County	Crescent Avenue	17,749.60
Halifax County	Roaches Road	53,952.27
Hants County (Windsor)	College Road	61,474.46
Kings County (Berwick)	Sewage Treatment Plant	50,700.53
Kings County (Berwick)	Sewage Treatment Plant	5,814.71
Chester	Aeration Equipment	10,567.84
Total		$256,003.96

Industrial Cape Breton

This section conducted a pollution control study for Industrial Cape Breton in conjunction with the Departments of Municipal Affairs and Health and Fitness. The study was designed to assess the sewage systems of the municipalities and to provide capital cost estimates to construct systems leading to the effective treatment of the sanitary waste discharging to the Sydney Harbour and was completed in January 1990. A wastewater characterization work program is now being developed by Metro Engineering and is expected to be complete by March 1, 1991.

Derelict Vehicle Program

The Derelict Vehicle Program has been very successful since it began in the spring of 1988. Thirty-five municipalities participated in 1989–90 and more than 4,200 derelict vehicles have been collected and audited.

Industrial Pollution Control Section

This section is attached, through the Waste Management Branch, to the Resource Management and Pollution Control Division and, as such, is responsible for administering an Industrial Wastes Permit Program under the Environmental Protection Act.

Major Industrial Waste Permit applications are processed by staff assigned to this section while additional permit applications are processed through the regional offices.

This section is also responsible for the development of regulations and guidelines as well as operations, procedures, and policy affecting Nova Scotia industry.

Approximately 45 industrial waste permits were issued for the year. The more significant permits requiring detailed review were Bowater Mersey Paper Co. Ltd., Construction Aggregates Ltd., Comeau's Sea Food Ltd., Westminer Canada Ltd., 855715 Ontario Ltd., and NSPC Point Aconi packages 1 and 2B.

PESTICIDE MANAGEMENT BRANCH

A major initiative for this branch came with the passing and proclamation of the first regulations under the Pest Control Products Act in July 1989. The regulations require extensive licensing and training for those involved in handling and selling regulated pesticide products. Staff continued to deal with industry in implementing training courses and exams in an effort to speed up the licensing timetable. All pesticide vendors were licensed before April 1, 1990. Pesticide applicators falling into the various categories outlined under the regulations must be licensed prior to April 1, 1991.

A sub-committee of the Pest Control Products Advisory Committee was established to draft new pesticide storage regulations. The sub-committee and staff worked extensively with the environment departments of the other Atlantic provinces in order to standardize storage regulations throughout the region. These regulations are expected to be in force sometime in early 1991.

During 1989–90 this branch completed a review of the pesticide permit system. The new system will include cost recovery and computerization. It is expected to be in full operation by spring 1991.

AIR QUALITY BRANCH

The functions and responsibilities of this branch include research into acid rain, implementing air quality monitoring programs and developing air quality regulations and guidelines. The Air Quality Branch also provides technical assistance in the review of industrial permits and environmental assessments.

A provincial program to replace or upgrade hospital incinerators is presently being conducted and all hospitals will have access to modern state-of-the-art incinerators within two or three years.

In June, the Ozone Layer Protection Act was passed and public participation in the development of new ozone regulations was initiated in spring 1990. Various sectors — industry, environmental groups and the general public — will be asked to provide written comments on the Ecology Action Centre's report on CFC/Halon use in Nova Scotia. It is anticipated that final regulations be implemented in 1991. In 1987 Canada was one of 33 countries to sign the "Montreal Protocol," thereby agreeing to cut CFC and halon production in half by 1999.

In accordance with the Canada-Nova Scotia Acid Rain Reduction Agreement, a report on the levels of acid gas emissions and ambient air quality in Nova Scotia was completed by this branch on March 31, 1990. The report shows that with the availability of low sulphur coal from the Westray Mine in Pictou County and the planned introduction of fluidized bed combustion technology at Point Aconi, the Nova Scotia Power Corporation will be well on its way to meeting its target emission level for 1994 of 160,000 tonnes. This in turn will enable the Province to meet and even improve upon its overall 1994 objective of 204,000 tonnes.

Regulations to limit gasoline volatility during the summer months were being developed for implementation during the summer of 1990. These regulations will form part of a larger plan being developed for the Canadian Council of Ministers of the Environment to address the problem of ground level ozone (urban smog).

Environmental Protection Guidelines for the Application and Removal of Protective Coatings During Bridge Maintenance Operations were drafted in conjunction with the federal Departments of Environment and Fisheries and Oceans. These were applied to all new contracts for bridge maintenance work done in the province during 1990 and will be finalized for application in 1991.

WATER RESOURCES MANAGEMENT BRANCH

Water Resources Services Section

The Water Resources Services Section is responsible for the development and delivery of services within four general program areas designed to promote the sustainable use and protection of Nova Scotia's surface and groundwater supply sources: (1) water supply

investigations; (2) water resource impact evaluation; (3) water resource inventory and management support; and (4) water well management. Program initiatives and highlights for the year include the following.

Water Supply Investigations

During the past year approximately 50 per cent of hydrogeology staff time was devoted to the resolution of water supply quantity and quality problems of private citizens, industry, and government agencies. Over 500 investigations were carried out in response to requests for assistance to resolve individual well and water supply problems ranging from naturally occurring contaminants such as arsenic to man-induced problems such as elevated salt concentrations due to road salting operations. In addition, a number of investigations were conducted to address various community and multiple-well water quality problems including:

- Kingston: Staff removed hydrocarbons detected in domestic wells in the Park Street area.

- Guysborough: Staff investigated well dewatering complaints following installation of a sewer main along Church Street.

- Truro: Following completion of an investigation of P.C.E. (tetrachloroethylene) in several municipal water supply wells for the town of Truro, the section supervised the installation of a field recovery well to pump P.C.E.-contaminated groundwater from the water supply aquifer.

- Lockeport: Staff completed a hydrogeological investigation and well survey for Tributyltin.

As a further component of this investigative role, the section frequently carries out research and field studies into specific Nova Scotia water supply contamination issues.

- As part of a joint federal/provincial four-year study of agrichemicals in rural water supplies, a random survey was completed in the summer and fall of 234 wells in the intensively farmed area of Kings County. An interim report on this study is scheduled for publication in June 1990.

- In response to a growing concern over well contamination due to road salting operations, an examination of the problem was carried out jointly with the Department of Transportation and Communications culminating in a report entitled The Environmental Implications of Road Salting in Nova Scotia. Acceptance of the recommendations in the report by both departments will result in the preparation of public information on this issue and on examination of management options to reduce the incidence of salt contamination problems.

Water Resource Impact Evaluation

Staff with the Water Resources Services Section contribute to departmental industrial waste permit reviews and assessments of effects of development proposals on water supply resources. These proposals include sanitary landfills, mining and quarry operations, highway alignments, and industrial plants. During the past year hydrogeological assessments were carried out for seven projects under the department's environmental impact assessment process and an equal number of industrial waste permit reviews. Projects included:

- Point Aconi Power Generating Station
- gypsum quarry in the Shubenacadie area
- Kelly Rock Ltd., aggregate quarry, Victoria Co.
- salvage yard proposal, Chester, Lunenburg Co.
- Westminer Canada Ltd. storage and loading facility for the transshipment of lead/zinc concentrates, Sheet Harbour Marine Industrial Park
- municipal waste disposal proposals in Cumberland Co., Antigonish Co. and Lunenburg Co.

Water Resource Inventory and Management Support

The section is also responsible for compiling and distributing information on the quality and availability of groundwater resources throughout the province. Continued progress was made in computerizing well log information provided by drilling companies for each well constructed in the province. The system, which can retrieve information such as well yields and depth, now contains over 31,000 well records dating back to 1977.

The section has also continued to operate 41 observation wells situated throughout the province, specifically to record fluctuations in water table levels. Finally, work was once again carried out in the summer months to continue with a compilation of an inventory of water uses and users within the province.

Water Well Management

Approximately 50 per cent of the province's residents depend upon wells for their water supply. To assure that water wells are properly constructed, both for the protection of water users as well as the groundwater resource, the section administers a licensing program for well diggers and drillers in the province. In addition, the section provides a well inspection service to ensure all regulatory requirements respecting well construction have been met and to assist property owners in resolving water problems that may be attributable to well condition or design. During 1989–90 Department of the Environment well inspectors conducted over 1,200 investigations.

Surface Water Management

During the department's reorganization, the Surface Water Management Section was created within the Resource Management and Pollution Control Division from elements of the Water Management Section, the Environmental Development Section, and the Water Resources Planning Section. The responsibilities and mandate of this new section are to:

1. coordinate programs concerning water course alteration
2. coordinate water use allocation programs
3. review land development proposals
4. coordinate water quality programs
5. assist in the development of watershed management plans
6. administer Canada–Nova Scotia water agreements.

Permits and Licenses

The section coordinates the processing of all applications under the Water Act. These include permits and licenses relating to watercourse alteration and withdrawal of water for individual municipal, industrial, agricultural and other uses. Of the 436 applications received, 24 were for water-use licenses, while the remaining 412 applications were for permits to work in a stream or to alter the stream channel. In addition 223 applications were received from forest operators and private woodlot owners wishing to install bridges or culverts on forest access roads. After reorganization, most permits and some licenses, while coordinated from the section, were processed at the regional level.

Watershed Management

During the year the department continued to participate on many watershed advisory boards or committees across the province. Staff

met with a number of interested groups not previously involved in watershed management, including some in Mulgrave, Sherbrooke, and Mahone Bay, to discuss methods for greater watershed protection.

Land Development Review

Subdivisions — Over 480 subdivision applications from around the province were reviewed during the year. The process included advising on erosion and sediment control measures and review of drainage plans and road profiles for the protection of watercourses.

Highway Alignments — A close liaison is maintained with the Department of Transportation and Communications staff to ensure that all roads, ditches and drainage easements are environmentally acceptable. Major highway reviews in 1989–90 included:

- Sections of Highway 101, four separate reviews and three major structures
- Sections of Sheet Harbour to Trafalgar Road, three separate reviews and one major structure
- Highway 103 twinning New Glasgow to Amherst overall review and two major structures
- Highway 107 from Highway 118 to Akerley Boulevard Extension overall review
- Bayers Lake Industrial Park Connector Road.

Transmission Alignments — The section provided the contact with Nova Scotia Power Corporation for the overall review of power transmission line alignment. In the fiscal year, two major lines were reviewed (Trenton to Hopewell and Lakeside to Busy Hill).

Other Projects — The section participated in the development with review of the Bedford Waterfront Development Plan and the Peggy's Cove Development Strategy Plan. The section represented the department on the Erosion and Sediment Control Panel at the Technical University of Nova Scotia.

Erosion Control

The *Erosion and Sedimentation Control Handbook* was published during 1989–90. Over 380 copies of the handbook were distributed to contractors, developers, planners, consultants, government agencies, and the general public. The department sponsored two seminars to introduce and explain the handbook to 185 and 99 interested participants.

Water Quality Studies

In 1989–90 work was carried out on a number of water quality studies throughout Nova Scotia. In the Liverpool/Shelburne area over 80 small streams were sampled as part of a study to determine the sources of acidity in Nova Scotia lakes. An experiment involving the mechanical liming of lakes was completed at Bayers Lake, Halifax County. Blair Lake in Cumberland County and Gaspereaux Lake in Antigonish County continued to be monitored for nutrient loading and eutrophication processes. The Mira River in Cape Breton County was sampled during the summer of 1989. A public release of the results in January 1990 indicated water quality suitable for recreational use and recommending development of a planning strategy to protect the river. Acid drainage problems were investigated and studied at the Bayers Lake Industrial and Highway 107 at Petpeswick Lake. The section was represented on the Drinking Water Quality Review Panel at the Technical University of Nova Scotia.

Federal/Provincial Agreements

Gauging of surface water streams in partnership with Environment Canada continued for the 15th year under the Water Quantity Surveys Agreement. The network consisted of 49 hydrometric stations and one sediment station. The Canada-Nova Scotia Flood Damage Reduction Program continued into the 11th year. This program is intended to reduce flood damage by identifying flood prone areas and recommending measures to prevent or reduce damage. The Studies and Flood Risk Mapping Agreements under the program expired June 1989. Negotiations were carried on to develop an additional agreement to cover the work of these agreements in the future.

ENVIRONMENTAL SUPPORT SERVICES DIVISION

This division is responsible for administering the Environmental Assessment Review Process, for overseeing Special Projects, the Youth Conservation Corps and the department's educational, training and enforcement activities.

ENVIRONMENTAL REVIEW

This branch is responsible for the administration and interpretation of the Environmental Assessment Act and the accompanying regulations.

The Environmental Assessment Bill was given royal assent in May of 1988, and the act and regulations were proclaimed law on July 14, 1989. They were developed to evaluate and make recommendations regarding undertakings to ensure environmental integrity is maintained while meeting community, social, health, and economic development needs.

Staff of the branch coordinate and manage the environmental assessment of a wide variety of projects which include Class I undertakings such as mining operation, quarries, hazardous waste treatment facilities, and projects involving interbasin water transfers, and Class II undertakings such as large scale power generation plants, oil and gas pipelines, and four-lane highways.

The following projects were registered for review under the Nova Scotia Environmental Assessment Act in 1989,.

1. *Point Aconi Power Generation Plant, Nova Scotia Power Corporation. Registered July 28, 1989, released with 53 conditions on March 12, 1990.*

2. *Goldboro Gold Mine Project, Exploration Orex Incorporated. Registered on September 1, 1989, undergoing assessment as of March 31, 1990.*

3. *Shubenacadie Gypsum Quarry Project, Nova Scotia Gypsum Limited. Registered on October 12, 1989 and screened out with conditions on October 31, 1989.*

4. *Gays River Lead - Zinc Mine, Westminer Canada Incorporated. Registered on October 12, 1989 and screened out with conditions on November 3, 1989.*

5. *Rock Quarry, Blue Mountain Resources Limited. Registered on December 27, 1989, undergoing assessment as of March 31, 1990.*

6. *Rock Quarry, Kelly's Rock Limited. Registered on February 2, 1990, undergoing assessment as of March 31, 1990.*

7. *Central Transfer Facility Project, Inland Environmental Services Limited. Registered on February 7, 1990, undergoing assessment as of March 31, 1990.*

8. *Coal Wash and Recovery Project, Black Gold Enterprises Limited. Registered on March 13, 1990, undergoing assessment as of March 31, 1990.*

Special Projects

This new section, created by the departmental reorganization, has responsibility for management and control of the department's pilot projects and for liaison with other government and non-government agencies in carrying out new departmental initiatives. This section will spearhead the department's launch of recycling and resource recovery programs over the upcoming years. This section has the task of formulating legislation to promote the three Rs: reduction, recycling, and recovery. Two major pieces of legislation, the Litter Abatement Act and the Recycling Act have resulted. Staff will be involved in establishing regulations pursuant to these acts and in providing guidance to any special boards on groups that may be established to implement programs.

EDUCATION AND TECHNICAL TRAINING BRANCH

The Education and Technical Training Branch was formed when the department was reorganized. This branch is staffed by a manager, a research statistical officer, and an environmental technologist. The duties of the branch are to provide education and information material to schools and the general public and to coordinate training programs for departmental staff.

The branch was in operation for two months during the 1989-90 fiscal year. During that time the branch collected material for an environmental information kit for schools, ordered materials and mailed a number of kits to schools. The branch also responded to approximately 100 requests for information on various environmental issues.

Enforcement

The Investigation and Enforcement section was also created by the departmental reorganization. This section coordinates investigation into suspected violations of the department's acts and regulations and gathers evidence for prosecution. Two full-time enforcement officers (one a former RCMP officer with over 20 years of service) are assigned to this section. They provide support to other members of the staff in the Halifax office as well as staff in regional offices across the province. This section is responsible for developing and implementing consistent plans of enforcement policy for use by officers across Nova Scotia, as well as developing and conducting enforcement training programs for department staff.

YOUTH CORPS

The Nova Scotia Youth Conservation Corps program was established by the Department of the Environment in 1989. The aim of the program is to help the government take a leading role in promoting environmental awareness, conservation, and clean-up of Nova Scotia while providing paid employment to the province's youth. In the summer of 1989, the Youth Corps employed 108 people on a variety of projects in communities around Nova Scotia.

The projects included clean-up of beaches, streams and abandoned dump sites; trail clearing; park enhancement; and other environmental enhancement and conservation projects. The clean-up projects resulted in removal of tons of garbage such as old tires, discarded kitchen appliances, oil cans, used diapers, and plastic debris. Beach clean-ups included areas in Antigonish (Mahoney's Beach, Antigonish Landing), Cumberland (Tidnish Head), Inverness (Inverness Main Beach, Whale Cove, Margaree Harbour shoreline), Pictou (Mahoney's Beach, Lismore Beach), Richmond (Arichat, cove at Canso Causeway), Sydney (Louisburg Harbour), and Yarmouth (Cape Forchu) Counties. Dump site clean-ups included those at the Digby ferry terminal, Long Point (Inverness County), Brow Mountain Road (Kings County), Milton (Queens County), and Birch Grove (near Sydney). Some of the beach work, such as that carried out at Tidnish Head, was undertaken jointly with summer employees of the Department of Lands and Forests.

Trail clearing and park enhancement projects involved the clearing of brush and tree branches from existing trails and maintenance and litter pick-up in community parks. Examples of these projects completed by the Youth Corps include the cross country ski trail near

the Wentworth Youth Hostel, overgrown sections of a hiking trail in Port Hawkesbury, a fitness trail behind Cole Harbour Place (Halifax County), the Kingston Fitness Trail in the Annapolis Valley, and the Bible Hill Recreation Park. Some of these projects were completed jointly with other youth organizations, such as visiting youth of American cycling associations.

In addition to the clean-up projects cited above, the Youth Corps participated in a number of diverse environmental enhancement and conservation projects. Examples of these projects include:

- Survey and analysis of litter collected from beaches and streams to determine sources of pollution and to assist the department in finding a solution to the problem.
- Community opinion polls about environment and pollution.
- Cleaning and restoration of an old Loyalist cemetery, established in the 18th century, in Port Mouton. The work included clearing out of brush and painting a fence that surrounded the cemetery.
- Renovation of a barn to house Pugwash's Keep Garbage Beneficial recycling program.
- Retrieval of a 300-lb. shingle saw blade from the river at Newburne near Highway 324. The blade, which posed a hazard to boaters, was donated to the DesBrisay Museum in Bridgewater.

UTILITIES DIVISION

This division is responsible for the operation and management of all provincially owned industrial water supplies and waste treatment facilities. These facilities include 11 water supply stations, one sewage treatment plant, and one industrial waste treatment facility.

Water pumping stations include saltwater supply plants at Grand Etang and Lockeport, freshwater supplies at Cheticamp, Port Hawkesbury, Canso, Pictou, Chester, Riverport, Lockeport, and Middle and Lower West Pubnico. A treated freshwater supply system is maintained in Lockeport.

Capital projects carried out during the year included:

- new aeration system completed at Boat Harbour.
- pipeline diverted for Canso water system.
- drive gear replaced at Canso sewage treatment plant.
- staves and supports on wood pipelines replaced for Landrie Lake water system.
- facility expanded at Cheticamp.
- road and ditches resurfaced and graded at Melford Brook.

REGIONAL OFFICES DIVISION

A major initiative under re-organization was the creation of a Regional Offices Division to oversee and strengthen the department's presence in seven regional and district offices across the province. Regional offices were given additional responsibilities to deliver programs, to issue permits, to handle environmental emergencies and public enquiries, and to liaise with local municipalities. Their mandate is to ensure a more efficient localized response to environmental concerns and to be the first point of contact for residents and businesses in their areas.

Most routine permits currently administered by the department, including water rights and petroleum storage permits, are administered by the regional office. Inspection and monitoring of commercial, industrial, and municipal waste management facilities are a further responsibility. Regional offices also play an important role in the enforcement of the department's acts and regulations. Regional offices are located in Sydney, Halifax, Truro and Middleton. District offices are located in Port Hawkesbury, Pictou, and Yarmouth.

OFFICE OF THE MINISTER AND DEPUTY MINISTER

The Office of the Minister and Deputy Minister provides the critical clearing house function for all new policies, programs and regulations as well as liaison with municipal, provincial, and federal agencies. This office recommends new legislation on environmental issues to the provincial Cabinet.

LEGAL SERVICES

This new section was created in August 1989 and includes a full-time solicitor from the Attorney General's department. This section prepares new legislation, drafts regulations and Ministerial Orders, prepares tenders and contracts, and provides legal advice to the Minister, Deputy Minister, department officials, the Environmental Control Council, and the various other boards established by the department. This section has an important role to play in the area of environmental enforcement and prosecution, by preparing court cases where charges are laid and in civil cases involving the department.

MEDIA AND PUBLIC RELATIONS

Staff in this section answer all media inquiries for the department and oversee departmental advertising. This section issues news releases, organizes conferences, and maintains links with newsrooms across the province. Staff also play an important role in planning the Province's participation in Environment Week and provide advice to groups and individuals in establishing their Environment Week projects.

ADMINISTRATION AND FINANCE

The Administration and Finance Division provides central services support to the department. Services include purchasing, financial records, facilities, and computer operations. In addition the Division maintains a departmental central file registry and a specialized library on environmental topics.

POLICY PLANNING AND COORDINATION

The Policy Planning and Coordination Division coordinates the development and communications of long-range environmental policies and goals based on an effective consultation process, sound technical advice, and thorough background research. The division also provides research and policy analysis to support the development and negotiation of Federal/Provincial agreements and coordinates the preparation of Ministerial and Deputy briefing material and departmental responses to House Orders and requests under the Freedom of Information Act.

GENERAL

ENVIRONMENTAL EMERGENCIES

The department works with other provincial and federal agencies to provide a coordinated approach to chemical and oil spills and other accidents involving hazardous materials that require immediate response. Departmental staff from the Environmental Emergencies and Hazardous Materials Section designate disposal sites and recommend procedure for disposal.

In Nova Scotia, all environmental emergencies must be reported to 426-6030 in the Halifax/Dartmouth metropolitan area or to 1-800-565-1633 elsewhere in the province.

CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT (CCME)

The Canadian Council of Ministers of the Environment (CCME) is the major intergovernmental forum in Canada for discussion and joint action on environmental issues of national, international and global concern. Environment ministers from across Canada meet at least twice a year to exchange information, make decisions on CCME activities and provide direction to government officials for work to be carried out under the auspices of CCME. Five permanent advisory committees function under CCME: Air Advisory Committee, Water Advisory Committee, Toxic Substances Advisory Committee, Research Advisory Committee and a Communications Advisory Committee. The presidency of CCME is rotated on an annual basis.

NOVA SCOTIA ENVIRONMENTAL CONTROL COUNCIL

The Environmental Control Council is an independent citizens' advisory board that advises the Minister on environmental issues and represents the interests of the public in environmental decisions. In 1989 the Council was given additional powers under the Environmental Assessment Act to hold public hearings on the environmental impact of projects referred by the Minister.

The council presents annual awards in recognition of outstanding environmental achievement in seven categories: individual, groups, organizations, education, youth, government, and industry. Details about

the Environmental Awards and a copy of the council's annual report can be obtained from:

The Executive Secretary
Nova Scotia Environmental Control Council
P.O. Box 2107
Halifax, Nova Scotia
B3J 3B7
Phone (902) 424-5300

WELL DRILLING ADVISORY BOARD

This industry/government advisory board was established under the Well Drilling Act to provide advice to the Minister on regulations and standards for the industry. The board meets on a regular basis respecting well drilling and helps the department examine applications and qualifications, and makes subsequent recommendations for licensing under the Act. A sub-committee on licensing oversees the testing of licensees and advises the Minister of their findings.

PEST CONTROL PRODUCTS ADVISORY COMMITTEE

Established in 1987, the committee currently has 17 members representative of a variety of sectors including business, government and agricultural association. They provide advice to the Minister on the development of regulations and policies pertaining to pesticide management.

ADVISORY GROUPS AND COMMITTEES

Petite Riviere Watershed Advisory Group
Queens County Medway-Mersey Watershed Advisory Group
C.C.M.E. Waste Management Committee
Canadian Association of Pest Control Officials
Atlantic Region Pesticide Advisory Committee
Pest Control Products Advisory Committee
Atlantic Region Pesticide Work Group
Federal Pesticide Registration Review
Manure Management Task Group
Task Force on Provincial Pesticide Training Officers
Atlantic Vegetation Management Association
Annapolis and Cornwallis River Committee
The Nova Scotia Well Drilling Advisory Board
The Nova Scotia Well Drilling Association
The Atlantic Water Well Group and School

County Board and Health and Municipal Planning Group, Re: Water Well Management
Canadian Water Well Group
Cape Breton Development Corporation Fine Tailings Basin Committee
Lingan Waste Rock Committee
Bras d'Or Lakes Integrated Resource Committee
Steering Committee – Coke Ovens Demolition
Sydney River Watershed Committee
Waterford Lake Protection Committee
Pottle Lake Watershed Committee
Atlantic Canada Chapter, Air and Waste Management Association
Nova Scotia Roadbuilders Association
Development in Slate Committee
Technical Review Committee Sydney Tar Ponds
Shubenacadie/Grand Lake Advisory Board
Lake Major Watershed Advisory Board
Advisory Panel on Erosion and Sediment Control
Technical Committee Flood Damage Reduction Program
Deputy Ministers Land Use Policy Committee
- Beaches Issue Group
- Soil and Water Conservation Issue Group
- Agricultural Issue Group
- Recreation Sub-committee

Pockwock Management Committee
Truro Watershed Management Committee
Port Hawkesbury Centennial Project Committee
Lake and Waterways Advisory Committee (Halifax)
Occupational Health and Safety
The Pictou County Community Futures Committee
Pictou County Water Sewer Study Group
Town of New Glasgow Watershed Protection Committee
The Pictou Harbour Study Committee
C.C.M.E. National Contaminated Site Remediation Task Group
C.C.M.E. Aboveground Petroleum Storage Task Group
Provincial Working Group on Environmental Emergencies
Canada-Atlantic Provinces PCB Incineration Management Committee
Annapolis Valley Affiliated Boards of Trade — Energy and Environment Committee
Halifax Harbour Task Force
Steering Committee – Industrial Cape Breton Waste Water Treatment
Nova Scotia Environmental Health Committee
Task Force on Clean Water
Industrial Cape Breton Sewage Treatment Study
Halifax Urban Watershed Committee
Advisory Committee on Protection of Special Places

Peggy's Cove Advisory Committee
First Lake Pollution Study Committee
Intergovernmental Review Committee — Bedford Waterfront
Highway Intergovernmental Review Committee-Highway 107
Atlantic Environment Ministers Energy Conservation
LRTAP Aquatic Effects Subcommittee
Research Panel on Drinking Water Quality
Stream Alterations Committee
Voluntary Planning Education Sub-committee
St. Mary's River Committee
Dartmouth Lakes Advisory
Bedford Lakes Advisory
Task Force Shubenacadie Planning/Pollution Control Study
Dept. of Transportation and Transport Canada Steering Committee Highway Environmental Data Base
Atlantic Provinces Water Consultative Committee
Atlantic Water Resources Group
Point Aconi Community Liaison Committee
Victoria Junction Tailings Monitoring Committee